

REMARKS

The Office Action dated March 19, 2008 has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto. Claims 1-12 are pending. By this Amendment, Claims 1, 9 and 12 are amended. Support for the amendments to the claims can be at least found in the discussion from paragraphs [0095] to [0105] of the application as originally filed. Applicants respectfully submit that no new matter is presented herein.

Allowed Claims

Applicants respectfully acknowledge and appreciate the indication by the Examiner that Claims 4-12 are allowed.

Claim Objections

Claims 9 and 12 are objected to for informalities therein. Applicants have amended the claims in a manner believed to be responsive to the objection.

Applicants respectfully request withdrawal of the objection.

Rejection Under 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,722,325 to Shimizu et al. (hereinafter "Shimizu"). Applicants respectfully traverse the rejection.

Claim 1 recites an intake air amount control system for an internal combustion engine which includes, among other features, a first control value-calculating means for calculating a first control value for use in feedback controlling one of the cam phase and the valve lift such that the detected intake air amount converges to the target intake air amount.

Shimizu discloses a variable valve control apparatus for engines that includes, among other features, an engine control unit 114 receiving detection signals from an air flow meter 115, a variable valve lift mechanism 112, and a variable valve timing mechanism 113. An intake air amount Q is detected by the air flow meter 115 (col. 2, lines 52-54) and a target operating angle TGVEL (target valve lift amount) of control shaft 16 in variable valve lift mechanism 112 is calculated for controlling a valve lift (col. 6, lines 56-64).

Applicants respectfully submit that Shimizu does not disclose or suggest a first control value-calculating means for calculating a first control value for use in feedback controlling one of the cam phase and the valve lift such that the detected intake air amount converges to the target intake air amount, as recited by Claim 1. Rather, in Shimizu, the detected intake air amount Q is not used at all for any control, including the calculation of the target operating angle TGVEL (see col. 6, line 32 to col. 8, line 23 and Figs. 12-14). The target operating angle TGVEL is calculated by calculating a target volume flow ratio TQHOST based on an accelerator opening APO, an engine rotation speed Ne and an effective discharge amount VOL#, and by correcting the calculated target volume flow ratio TQHOST according to an intake negative pressure and a change in valve flow loss due to valve timing controlled by a variable valve timing mechanism 113 (see col. 6, lines 45-64, and Figs. 12 and 14). The target operating angle TGVEL is calculated irrelevant to the detected intake air amount Q.

Moreover, the Office Action asserts that Shimizu discloses that the “target valve lift amount of lift mechanism 112 is calculated and feedback controlled based on target volume flow (column 6, lines 58-67 with column 7, lines 1-8).” Shimizu merely discloses

that the DC servo motor 121 is feedback controlled, so that an actual operating angle coincides with target operating angle TGVEL (see col. 6, lines 65-67). Shimizu does not disclose or suggest calculating a first control value for use in feedback controlling one of the cam phase and the valve lift such that the detected intake air amount converges to the target intake air amount, as recited by Claim 1.

To qualify as prior art under 35 U.S.C. § 102, each and every feature recited in a rejected claim must be disclosed by the applied art. For at least the reasons provided above, Applicants submit that Shimizu does not disclose or suggest all of the features recited by Claim 1. Therefore, Applicants submit that Claim 1 be deemed allowable over Shimizu.

Claims 2-3 depend from Claim 1. It is respectfully submitted that these dependent claims be deemed allowable for at least the same reason(s) Claim 1 is allowable, as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of the rejection.

Rejections Under 35 U.S.C. §103

Claim 2 is rejected under 35 U.S.C. § 103(a) as being obvious over Shimizu. Claims 3/1 and 3/2/1 are rejected under 35 U.S.C. § 103(a) as being obvious over Shimizu in view of U.S. Patent No. 7,124,013 to Yasui (hereinafter "Yasui"). Applicants respectfully traverse both rejections.

Claim 1 recites an intake air amount control system for an internal combustion engine which includes, among other features, a first control value-calculating means for calculating a first control value for use in feedback controlling one of the cam phase and

the valve lift such that the detected intake air amount converges to the target intake air amount.

Shimizu is discussed above. Applicants respectfully submit it would not be obvious to one of ordinary skill in the art to modify Shimizu to arrive at the features of the present invention. A stated object of Shimizu is “avoiding a reduction in volume efficiency and the blow-by and spit-back of unburned gas, caused by a change in valve overlap amount, while controlling a valve lift amount to a requested amount.” See col. 1, lines 34-40.

Furthermore, Applicants respectfully submit that Yasui does not cure the deficiencies of Shimizu. Yasui discloses a control device, a control method, a control unit and an engine control unit for eliminating the lag time in controlling the timing between the input and output of a controlled object while improving the control accuracy at the same time (see Abstract). Yasui does not teach or suggest a first control value-calculating means for calculating a first control value for use in feedback controlling one of the cam phase and the valve lift such that the detected intake air amount converges to the target intake air amount, as recited by Claim 1.

For at least the reason(s) stated above, the Applicants respectfully submit that Shimizu and Yasui, alone or by any combination, do not teach or suggest each and every one of the features recited by Claim 1. As such, Applicants respectfully submit that one of ordinary skill in the art would not find it obvious to modify Shimizu and Yasui, alone or by any combination, to arrive at the features recited by Claim 1. Accordingly, Applicants submit that Claim 1 be deemed allowable over Shimizu and Yasui.

Claims 2 and 3 depend from Claim 1. Applicants respectfully submit that Claims 2 and 3 should be deemed allowable for at least the same reason Claim 1 is allowable, as well as for the additional subject matter recited therein.

Applicants respectfully request withdrawal of both rejections.

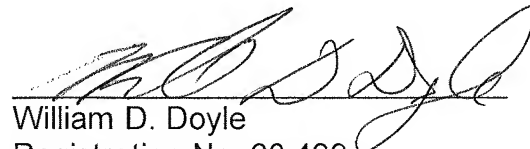
Conclusion

In view of the above, the Applicants respectfully request withdrawal of the outstanding objections and rejections, allowance of Claims 1-12, and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing attorney docket number 108419-00082.**

Respectfully submitted,



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